WHAT IS CLAIMED IS:

1. A method for fabricating a rotor assembly for a gas turbine engine, said method comprising:

providing a plurality of rotor blades that each include an airfoil, a dovetail, a shank, and a platform, wherein the platform extends between the shank and the airfoil, and wherein the dovetail extends outwardly from the shank; and

forming a cooling circuit within a portion of the shank to supply cooling air to the rotor blade for supplying cooling air to the rotor blade for impingement cooling a portion of the rotor blade and for supplying cooling air to the rotor blade for purging a cavity defined downstream from the rotor blade.

2. A method in accordance with Claim 1 wherein the shank includes a concave sidewall and a convex sidewall, said forming a cooling circuit within a portion of the shank further comprises:

forming a first opening in the shank concave sidewall for supplying impingement cooling air towards a portion of the rotor blade; and

forming a second opening in the shank convex sidewall for channeling purge air downstream from the rotor blade.

3. A method in accordance with Claim 2 wherein the shank concave and convex sidewalls are connected together at an upstream and a downstream rotor blade sidewall, said forming a second opening in the shank convex sidewall further comprises extending the second opening through the rotor blade downstream sidewall such that the second opening is between the rotor blade platform and dovetail.

4. A method in accordance with Claim 2 wherein forming a first opening in the shank concave sidewall further comprises forming the first opening in the shank concave sidewall such that air discharged from the first opening is channeled towards the platform for impingement cooling the platform.

5. A method in accordance with Claim 1 wherein forming a cooling circuit within a portion of the shank further comprises forming the cooling circuit within the shank to facilitate reducing platform creep during engine operation.

6. A rotor blade for a gas turbine engine, said rotor blade comprising:

a platform;

an airfoil extending radially outward from said platform;

a shank extending radially inward from said platform;

a dovetail extending from said shank; and

a cooling circuit extending through a portion of said shank for supplying cooing air for impingement cooling at least a portion of said rotor blade and for channeling purge air downstream from said rotor blade into a cavity defined within the gas turbine engine.

7. A rotor blade in accordance with Claim 6 wherein said shank comprises a convex sidewall and a concave sidewall coupled together at an upstream side and a downstream side of said rotor blade, said cooling circuit comprising a plurality of openings extending through at least one of said convex sidewall and said concave sidewall.

8. A rotor blade in accordance with Claim 7 wherein said cooling circuit plurality of openings further comprise a first opening and a second opening, said first opening extending through said shank concave sidewall for directing cooling air for impingement cooling of said platform, said second opening extending through said shank convex sidewall for directing cooling flow from said shank cavity downstream from said rotor blade.

9. A rotor blade in accordance with Claim 7 wherein said second opening extends between said shank convex sidewall and said rotor blade downstream side.

10. A rotor blade in accordance with Claim 9 wherein said second opening extends through said rotor blade downstream side between said platform and said dovetail.

11. A rotor blade in accordance with Claim 7 wherein said first opening facilitates reducing an operating temperature of said platform.

12. A rotor blade in accordance with Claim 6 wherein said cooling circuit facilitates blade reducing platform creep during engine operation.

13. A gas turbine engine comprising a rotor assembly comprising a plurality of rotor blades coupled to a rotor disk, each of said plurality of rotor blades comprises an airfoil, a dovetail, a shank, and a platform, said platform extending between said shank and said airfoil, said dovetail extending outward from said shank, at least one of said plurality of rotor blades further comprises a cooling circuit extending through said shank for supplying cooling air for impingement cooling a portion of said rotor blade and for supplying purge air downstream from said platform.

14. A gas turbine engine in accordance with Claim 13 wherein each said rotor blade comprises a pressure side and a suction side, said shank comprises a convex sidewall and a concave sidewall connected at an upstream sidewall and a downstream sidewall of said rotor blade.

15. A gas turbine engine in accordance with Claim 14 further comprising a buffer cavity downstream from said plurality of rotor blades such that each said rotor blade platform defines a portion of the buffer cavity, said cooling circuit comprises a first opening and a second opening, said first opening extends through said shank concave sidewall for directing cooling air for impingement cooling a portion of said platform, said second opening extends through said shank convex sidewall for directing cooling flow from said shank cavity into the buffer cavity.

16. A gas turbine engine in accordance with Claim 15 wherein said second opening extends between said shank convex sidewall and said rotor blade downstream sidewall.

17. A gas turbine engine in accordance with Claim 16 wherein said second opening extends through said rotor blade downstream sidewall between said platform and said dovetail.

18. A gas turbine engine in accordance with Claim 16 wherein said second opening facilitates reducing hot flowpath gas ingestion within the buffer cavity.

19. A gas turbine engine in accordance with Claim 15 wherein said first opening facilitates reducing an operating temperature of said rotor blade platform.

20. A gas turbine engine in accordance with Claim 15 wherein said rotor blade cooling circuit facilitates reducing platform creep during engine operation.